



Lesson 5

South American corn

Treasure as Tribute from a Rich Land

Earlier lessons in this unit focused on the physical and biological aspects of Latin American geography. This lesson expands upon these characteristics and provides additional insight into the types of natural resources available in the Aztec empire.

Students study historical illustrations of Aztec tribute records to build an understanding of the ecosystem goods that formed the basis of this culture's economies and trading systems. They investigate tribute records of five provinces, examine photographs of

tribute items, and identify specific resources from each province.

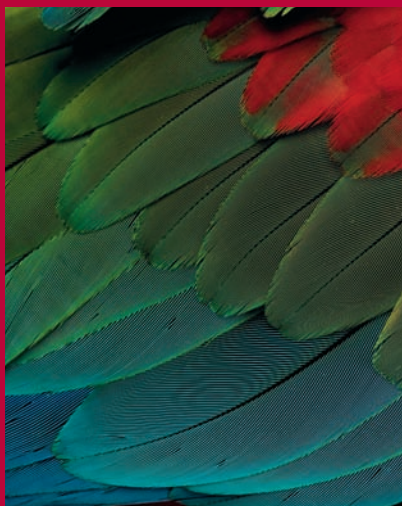
Students learn the Aztec numbering system and apply the system to the tribute records to determine the quantities of resources demanded as tribute.

Students examine a map of the Aztec empire to help them understand that different types of goods were available in various parts of the empire. They also analyze and discuss the value of natural resources and the products made from these resources.

Learning Objective

Provide examples of the goods and ecosystems services that were the basis of the Maya, Aztec, and Inca economies and trading systems.

Discuss the role of physical geography, climate and the availability of natural resources in the development of Maya, Aztec and Inca urban societies.



Poma (a native Peruvian who saw the Spanish conquest when he was a child) in 1600–1615 wrote the other document commissioned by the Spanish, the only pre-conquest record of Inca history and daily life.

Ecosystem services provided the water, soil fertility, and sunlight that allowed these agricultural civilizations to flourish. Other services included precipitation facilitated by mountains, the replenishment of soil by volcanic ash, and the accumulation of rich organic material in montane lake basins.

These peoples venerated gods devoted to these ecosystem services. Included among these gods were those that brought rain: *Chac* (Maya), *Pariacaca* (Inca), *Tlaloc* (Aztec); and gods that brought sunshine: *Kinich Ahau* (Maya), *Inti* (Inca), *Huitzilopochtli* (Aztec). Some of these gods also represented specific goods; the Incas connected their sun god, *Inti*, with gold.

Background

Researchers find it difficult to get an accurate picture of the Aztec, Maya, and Inca cultures in 1500 CE. Archaeologists employ a variety of methods to determine the goods that formed the bases of these civilizations' economies. They easily recover well-preserved ceramics, stone, and metalwork from burial and house sites, but items such as foodstuffs, cloth, and paper decay quickly in most environments. Objects from large temples and palaces, such as urns and statues, are found more frequently than from the remains associated with the common people, such as ropes and wooden tools. Common household items such as ropes and wooden tools (organic materials) appear less frequently in the archaeological record because they are less likely to be preserved.

Fortunately, two important documents commissioned by the Spanish to help them administer their new territories in the Americas provide insights into Aztec and Inca culture. The *Codex Mendoza*, commissioned in 1541–42, describes Aztec history and contains detailed records of the tribute paid by the

38 provinces of the empire. This document offers an important insight into the difficult-to-preserve goods, such as food, cloth, costumes, lumber, and feathers, that formed the base of the Aztec economy. The *Codex Mendoza* helps explain the Aztec economy, which operated without money. In South America, Guaman

Key Vocabulary

Amaranth: A plant grown throughout Latin America whose seeds are useful as a high protein grain.

Amber: Translucent yellow, orange, reddish or brown fossilized resin that is valued as a gemstone.

Cacao: A Central-American tree whose seeds are used to make cocoa and chocolate.

Chia: A plant in the mint family whose seeds are edible and highly nutritious.

Cochineal: A bright red dye made from the dried bodies of the small cactus-feeding cochineal insect that is found primarily in Mexico.

Copal: A hard resin derived from a variety of tropical trees that is used as incense and to make varnish.

Loincloth: Strip of cloth worn around the waist and between the legs.

Maguey: Desert agave plant that yields fiber and a sweet, honey-like syrup that can be distilled into tequila.

Quetzal: A Central-American bird known for its bright green and red feathers and the male's long tail feather.

Tribute: 1. Money paid by one ruler or nation to another
2. Any exacted or enforced payment.

Toolbox



Summary of Activities

Students examine historical illustrations to develop an understanding of the types of resources valued by Latin American cultures. They learn the Aztec numbering system to calculate the quantities of resources demanded in tribute. Students discuss how natural resources formed the base of economic and trading systems for these cultures.



Instructional Support

See Extensions & Unit Resources, pages 32–33

Prerequisite Knowledge



Students should have:

- completed previous lessons.

Advanced Preparation



Gather and prepare Activity Masters.

Gather and prepare Materials Needed:

- Prepare group sets of materials including: an **Aztec Province Glyph** and the corresponding **Tribute Records from the Codex Mendoza** for each group. (*Note: Each group should receive materials from a different Aztec Province.*)

Gather and prepare Visual Aids:

- Prepare transparencies.
- Gather from previous lessons:
 - **Maya, Inca, and Aztec Regions** from Lesson 4



Materials Needed



A-V equipment:

- Overhead or LCD projector, screen

Visual Aids



Transparencies:

- **Provinces of the Aztec Empire**, Visual Aid #19
- **Key to Tribute Records**, Visual Aid #20
- **Examples of Aztec Tribute Items**, Visual Aid #21
- **Cihuatlán Province Tribute Record (Aztec)**, Visual Aid #22
- **Aztec Numbering System**, Visual Aid #23
- **Tributes Paid by Five Aztec Provinces**, Visual Aid #24
- **Tepecuacuilco Province Tribute Record (Aztec)**, Visual Aid #25

Duration



Preparation time:

20 min.

Instructional time:

55 min.



Safety Notes

None

Activity Masters in the Supporting Materials (SM)

Aztec Province Glyphs

SM, Page 52
One per class

Key to Tribute Records

SM, Pages 53–55
One per group

Cihuatlán Province Codex Mendoza Tribute Records

SM, Page 56
One per group
(Cihuatlán)

Tepeyacac Province Codex Mendoza Tribute Records

SM, Page 57
One per group
(Tepeyacac)

Tochtepec Province Codex Mendoza Tribute Records

SM, Page 58
One per group
(Tochtepec)

Xoconochco Province Codex Mendoza Tribute Records

SM, Page 59
One per group
(Xoconochco)

Tepecuacuilco Province Codex Mendoza Tribute Records

SM, Page 60
One per group
(Tepecuacuilco)

Procedures

Vocabulary Development

Use the **Key Unit Vocabulary** (Lesson 1 Activity Master) to introduce new words to students as appropriate. This vocabulary sheet will be used throughout the unit.

Step 1

Review the term “ecosystem goods” and “ecosystem services” with students. Ask students to identify four ecosystem goods from Latin American (*Parrot feathers, alpaca, grasses, rubber trees*). Ask them to identify two ecosystem services (*Roots of plants holding soil together, animals pollinating plants*).

Step 2

Project the transparency map of **Maya, Inca, and Aztec Regions** (Visual Aid #14). Point to Cuzco (Inca capital) and Tenochtitlan, Texcoco, and Tlacopan (Aztec capitals). Explain that the Maya lived in many city-states that grew powerful and faded over time, so no single capital city dominated the culture.

Tell students that both the Aztec and Inca were empires with a large capital city or cities. Explain that both of these empires possessed methods for bringing wealth from other areas into the cities, but each empire brought in wealth differently. Ask students, “How do you think diverse resources reached these places?” (*They were brought by the most efficient means of travel depending on the city’s location; for example, by humans on foot, by pack animals, and by boat*).

Step 3

Show the transparency of the **Provinces of the Aztec Empire** (Visual Aid #19) and point to the five provinces that students will study: Cihuatlán, Tepeyacac, Tochtepec, Xoconochco, and Tepecuacuilco. Explain that each province included several cities and that Aztec rulers required provinces and cities to pay tribute as a form of submission or in exchange for protection. Explain that these tributes came as raw resources (goods) and as products.

Step 4

Organize students into five groups and assign each one a different province. Give each group one of **Aztec Province Glyphs** (Lesson 5 Activity Master) and the **Tribute Record from the Codex Mendoza** (Lesson 5 Activity Masters) for their province. Explain that the *Codex Mendoza* is an ancient book that contains the history of the Aztecs and including the tributes paid by conquered provinces. These records, written by Aztec scribes, show raw materials and finished products that were paid as tribute to the capital cities. Tell students that the Spanish commissioned these documents to track the goods coming into the Valley of Mexico several years after the Spanish conquered the Aztecs (1541–42).

Step 5

Distribute the **Key to Tribute Records** (Lesson 5 Activity Master) to each group. At the same time, project the transparency of **Key to Tribute Records** (Visual Aid #20). Point out that the goods are divided into three categories: agricultural products, extracted natural products, and valuable rocks and minerals. Have students review the pictures and the names of the goods or products. (*Note: If time is available, show transparency of Examples of Aztec Tribute Items* [Visual Aid #21]. *The transparency includes photographs of items students might not recognize.*)

Step 6

Project the **Cihuatlán Province Tribute Record (Aztec)** (Visual Aid #22). Tell students that the picture at the upper left corner represents the Aztec Province and the other glyphs on the left side represent cities in the province.

Point to three of the goods on the lower right side of the codex: bundles of cotton, bundles of cacao, and, the red thorny oyster. Have students use the **Key to Tribute Records** to identify these goods. After students have identified these illustrations, draw student attention to the glyphs above them, which show the amount that was required in tribute.



Step 7

Project the transparency of the **Aztec Numbering System** (Visual Aid #23). Review it with students. Explain that the Aztec used a base 20 numbering system, which means every symbol used increases by a factor of 20. (Dots=1, flags=20, feathers=400 [20x20], and incense pots= 8,000 [20x20x20]).

Project the transparency of **Cihuatlán Province Tribute Record (Aztec)**. Review some of the tribute items to prepare students to recognize the goods and the quantities of resources demanded from the rulers of the province. Ask students, “How many bundles of cacao beans were required in tribute?” ($40 \times 20 = 80$ bundles) “How much cotton?” (*400 bundles*) “How many red thorny oysters? (*800*)

Step 8

Give students 15 minutes to identify at least five tribute items (resources) from their province and the quantity required according to this record. After 15 minutes, project the **Tributes Paid by Five Aztec Provinces** (Visual Aid #24) to allow students to check for accuracy of responses.

Step 9

Project transparency of the map of **Provinces of the Aztec Empire**. Have students identify the location of the province associated with their group. After students have identified the location of their province, ask them to share examples of the types and amounts of tributes their province was required to export to the Aztec capitals.

Lead a class discussion on how natural resources became the base of the economic and trading systems for the Aztecs. Ask students, “How were specific provinces able to send such large amounts of certain items?” (*Because the ecosystems surrounding the specific provinces provided the goods and ecosystem services needed to produce large amounts of the good. For example, cotton grew on coastal floodplains; quetzals lived in montane forests; gold, jade, and greenstone deposits formed in specific areas; and jaguars lived in the rainforests.*)

Ask students, “Does the distance between your province and the capital affect the types of tributes demanded?” (*Yes, provinces closer to the capitals sent more finished products and food. Provinces farther from the capitals sent raw materials.*)

Step 10

Project the transparency of **Tepecuacuilco Province Tribute Record (Aztec)** (Visual Aid #25). Point to the red costume with the pointed hat and shield (a *cuextecatl* warrior costume). Explain that creating this costume required the following materials: cotton, red feathers, gold dust, cochineal (a red dye), and a wooden shield. Explain that the manufacture of these items required the import of raw materials from other provinces. Explain that these products could have first come from other provinces to Tepecuacuilco before the final costume was sent to one of the capitals. Have students identify some of these products on their tribute lists.

Step 11

Remind students that the goods derived from the various ecosystems depended on ecosystem services, functions and processes in natural systems that are essential to human life and the functioning of our economies and cultures. Ask students, “What were some of the important ecosystem services to the Aztecs? (*Sources and cycling of water, the energy of the Sun, pollination.*)

Tell students that these peoples also honored the importance of ecosystem services with the worship of their gods. These gods included those that brought rain: *Chac* (Maya), *Pariacaca* (Inca), *Tlaloc* (Aztec); and gods that brought sunshine *Kinich Ahau* (Maya), *Inti* (Inca), *Huitzilopochtli* (Aztec). Some of these gods also represented specific goods; the Incas connected their sun god, *Inti*, with gold.

Lesson Assessment

Description

Lesson 5 teaches students about goods and ecosystems services that were the basis of the Aztec economy and trading system. Small group and class discussions about tribute records for the Aztec provinces in Steps 4–7 reflect student understanding that ecosystem goods vary depending on the geographical location of the provinces. As students use the **Aztec Numbering System** in Steps 7–8 they demonstrate an understanding that ecosystem goods form the base of the Aztec economy. Student responses in Step 11 demonstrate understanding of the relationship between ecosystem goods and services.

Suggested Scoring

Assessment for Lesson 5 is embedded in student discussions and oral responses to questions during class.

Aztec Province Glyphs Lesson 5 Activity Master

Aztec Province Glyphs

Cihuatlan Province



Tepeyacac Province



Tochtepec Province



Xoconochco Province



Tepequaculco Province



Key to Tribute Records Lesson 5 Activity Master | page 1 of 3

Agricultural Products



Bin of Corn



Bin of Beans and Amaranth



Tobacco Smoking Sticks



Bundle of Cotton



Bundle of Dried Chilies



Bundle of Red Cacao Beans



Bundle of Brown Cacao Beans



Gourd Box



Jar of Honey



Gourd Bowls for Drinking Cacao

Key to Tribute Records Lesson 5 Activity Master | page 2 of 3

Extracted Natural Products



Red Thorny Oyster Shell



Rubber Ball



Basket of Refined White Copal Incense



Basket of Unrefined Black Copal Incense



Pot of Liquidambar Resin (Used for Medicine and Incense)



Wooden Carrying Frame



Bag of Small White Feathers



Little Handful of Feathers



Large Handful of Feathers



Handful of Quetzal Feathers



Large Bundle of Feathers



Jaguar Skin



Deer Skin



Cane Sticks



Blue Cotinga Bird Skin

Key to Tribute Records Lesson 5 Activity Master | page 3 of 3

Valuable Rocks and Minerals



Bundle of Lime



Obsidian War Club and Wooden Shield



Copper Axe



Lip Plug of Gold/Precious Stone



Amber



Gold Beads



Turquoise Beads



Jade or Greenstone Beads



Gold Headbands



Bowl of Gold Dust

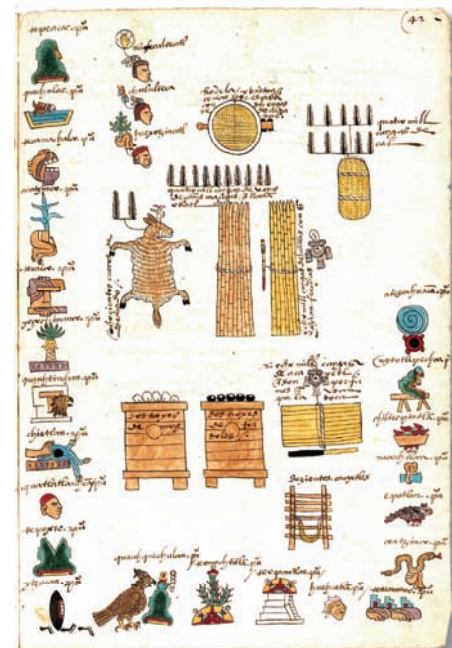


Turquoise Plate

Province 1: Cihuatlan—Place of Many Women



Province 2: Tepeyacac—The Nose of a Hill



Province 3: Tochtepec—On the Hill of the Rabbit



Province 4: Xoconochco—On the Sour Cactus Fruit

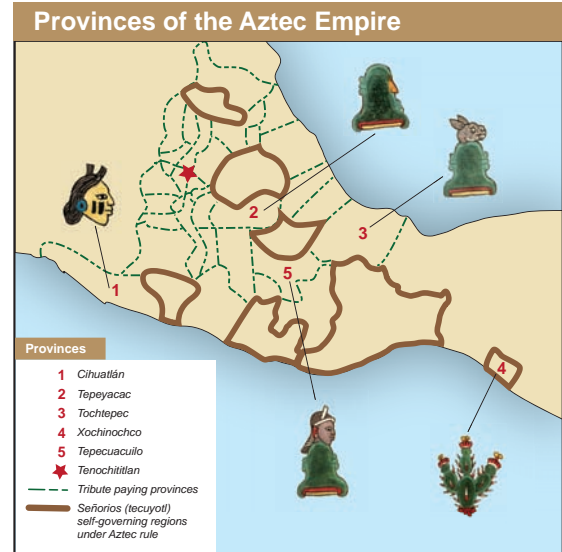


Tepecuacuilco Province Codex Mendoza Tribute Records Lesson 5 Activity Master

Province 5: Tepecuacuilco—Place Where Faces are Painted



19 Provinces of the Aztec Empire Visual Aid — Transparency



20 Key to Tribute Records Visual Aid — Transparency

Key to Tribute Records

Agricultural Products



Bin of Corn



Bin of Beans and Amaranth



Tobacco Smoking Sticks

Extracted Natural Products



Little Handful of Feathers



Large Handful of Feathers



Handful of Quetzal Feathers



Large Bundle of Feathers

Valuable Rocks and Minerals



Bundle of Lime



Obsidian War Club and Wooden Shield



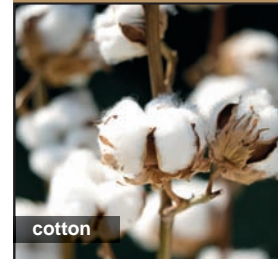
Copper Axe



Lip Plug of Gold/Precious Stone

21 Examples of Aztec Tribute Items Visual Aid — Transparency

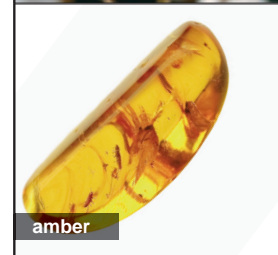
Aztec Tribute Items



cotton



cacao beans

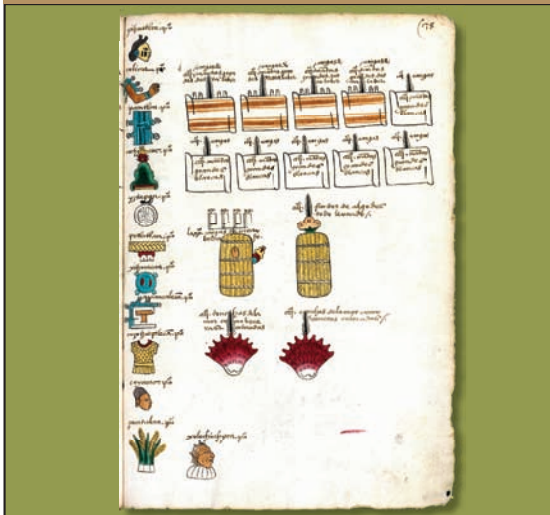


amber

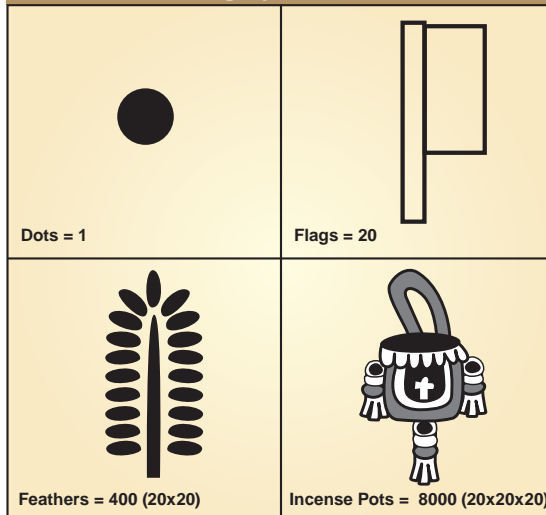


quetzal feathers

Cihuatlán Province Tribute Record



Aztec Numbering System



Tributes Paid by Five Aztec Provinces

Province 1: Cihuatlán

- 80 bundles of red cacao
- 400 bundles of cotton
- 800 red thorny oyster shells

Province 2: Tepeyacac

- 12,000 bundles of cane
- 4,000 bundles of lime
- 800 deerskins
- 8,000 tobacco smoking sticks
- 200 carrying frames
- 1 bin of corn
- 1 bin of beans

Province 3: Tochtepec

- 2 gold headbands
- 2 of gold beads
- 3 large greenstones
- 7 strings of greenstone beads
- 40 lip plugs
- 4 large bundles of feathers
- 8,000 little handfuls of blue feathers
- 8,000 little handfuls of red feathers
- 8,000 little handfuls of green feathers
- 100 pots of liquidambar resin
- 200 bundles of cacao
- 16,000 balls of rubber

Province 4: Xoconochco

- 2 strings of greenstones
- 800 large handfuls of blue feathers
- 800 large handfuls of red feathers
- 800 large handfuls of green feathers
- 800 large handfuls of yellow feathers
- 160 blue cotinga bird skins
- 800 bundles of quetzal feathers
- 2 lip plugs
- 200 loads of cacao
- 400 jaguar skins
- 800 bowls for drinking cacao
- 2 large pieces of amber

Province 5: Tepecuacuilco

- 100 copper axes
- 1,200 gourd bowls
- 200 jars of honey
- 400 baskets of white copal incense
- 8,000 balls of black copal incense
- 5 strings of greenstones
- 2 bins of corn and chia
- 2 bins of beans and amaranth

Tepecuacuilco Province Tribute Record



